

Objective(s). Our aim in this one-year pilot study is to gain familiarity with two key aspects of data required for the full study. The two objectives of the pilot study are: Objective P1: Extract and validate Gleason scores from 2000-2004 VA Central Cancer Registry (VACCR) data. Objective P2: For years 2000-2004, demonstrate geographic practice pattern variation in probability of treatment type as a function of medical center effects.

Research Design. This study will be a retrospective analysis of secondary data.

Methodology. Methods will be quantitative. VACCR Gleason score information is available in 2004 as a numerical variable and in prior years in a pathology text field. We will extract Gleason score from the pre-2004 text data and compare distributions with that obtained from the 2004 numerical field. Based on our pilot sample, we will estimate a model of prostate cancer treatment across the main treatment modalities: radical prostatectomy (RP), external beam radiation therapy (EBRT), brachytherapy (BT), and active surveillance (AS). Independent variables will include age, co-morbidities, county-level demographics (education, income, provider density), facility quality and VAMC fixed effects.

Findings. N/A

Clinical Relationships. Prostate cancer is pervasive but infrequently deadly. Clinically insignificant disease is common and over-diagnosis/over-treatment is a concern. Thus, a principal clinical challenge is presented by screening and diagnostic tests that are not conclusive about whether treatment will be beneficial. Because of the lifestyle implications of side effects, choice of treatment is difficult for many patients. Unfortunately there is a paucity of comparative effectiveness research to guide patients and providers. Consequently, life-altering decisions about prostate cancer treatment are made in a relatively low-information environment.

Impact/Significance. Comparative effectiveness research is a high priority for the Department of Veterans Affairs. The full study this pilot will support will help implement VA's commitment by investigating the comparative effectiveness of major modes of treatment for localized prostate cancer. Though prostate cancer is common, it is infrequently deadly. All treatment options are associated with significant side effects that relate to quality of life. The results of the full study will be of interest to VA clinicians who need to assess the risks and benefits of prostate cancer treatment for each patient. It will provide valuable context in general and useful guidance for targeting and timing treatment. There will be benefits for VA researchers as well because this project would be among the first VA comparative effectiveness study to use local practice patterns as instruments in an instrumental variables analysis of the effects of medication choice on outcomes.